

FIELD TRIPS OF THE CLUB

SATURDAY, SEPTEMBER 12

Croton Point, extending into the Hudson from Harmon, and dividing the Tappan Zee from Haverstraw Bay, proved a new and interesting objective for the club on the field meeting of Saturday afternoon, Sept. 12. The rounded and lobate contours of this recessional moraine, the dump of the Pleistocene ice sheets when they had decayed back from their farthest south at New York Bay, and had halted for a time 30 miles up the river, are quite similar to the kettle moraines of Long Island. The wooded areas, comprising about half the area, are of second growth deciduous trees, including some fine black oaks at the east end, red and white oaks elsewhere, beeches, gray birches, red maples and some fine copses of sassafras. The point was once under cultivation for fields and vineyards and the mansion, wine cellars and other buildings of the estates formerly occupied there, are interesting relics of former years. The Point is now preserved as one of the units of the Westchester County Park system, which has, so far, modified the conditions found upon acquisition very little, and it would seem as if further development might retain much of the area without artificial changes.

The salt marshes bordering the point and occupying the lowlands between the moraine lobes, are filled with purple loosestrife, rose mallow, both broad and narrow leaved cattails, *Phragmites communis*, and water arum, and the seaside goldenrod was coming into bloom. An interesting but irritating plant was the bur-grass, *Cenchrus tribuloides*, with its spiny seeds suggestive, as the specific name indicates, of the tribuli of the Romans, caltrops of medieval military usage, spiked globes thrown before horses to break up a cavalry charge. Dense beds of the partridge pea, *Cassia Chamaecrista*, with the leaflets folding back upon the midrib at a touch, were frequent. Brackish ponds on the south shore, emptying by rills across the beach at low tide, contain *Ceratophyllum* and *Zostera*. A colony of the great lobelia offered a fine touch of color.

Two large ginkgos, part of the early ornamental planting of the estate, offered a strange contrast beside a copse of sassafras. The English hawthorn has escaped from early planting and was in dense fruit on the south side. The water hemp, *Acnida can-*

nabina, develops unusually large individuals, eight feet high and an inch through at the base. A colony of the great horsetail, *Equisetum hyemale*, borders what appears to be a kettle hole depression.

The boulder beaches are interesting, with a variety of ice worn fragments from far and near, diabase from the ridge of the Tors, opposite; norites from the Blue Mountain region, granites and gneisses from the Highlands of the Hudson and quartzite cobbles from just beyond, slates and limestones from the middle Hudson, Catskill sandstones and conglomerates, and Taconic schists.

R. H. TORREY

SUNDAY, SEPTEMBER 13

The trip to Fresh Kills, Staten Island, partly on account of the fact that the route taken was slightly different from that of last year, yielded several species not found before. A new station was located for *Robinia viscosa* Vent., the clammy locust, namely at the foot of the hill opposite the church, near the start of the trip at Richmond. The route was rich in polygonums, *P. hydropiperoides*, *arifolium*, and *sagittatum* being found in the brook at the beginning of the trip, and nearby also the rarer *P. Muhlenbergii*, with *P. pennsylvanicum* of course common in many places throughout the day. Besides these, *P. scandens* the climbing false buckwheat was seen, and, toward the end of the day, what appeared to be *P. orientale*, the prince's feather. Other noteworthy plants collected were *Angelica villosa*, *Eupatorium verbenaefolium*, *Panicum virgatum* and *Tridens flava*, *Acnida cannabina*, the water hemp, and *Aster tenuifolius* and *subulatus*. The last two are salt marsh asters and are very similar, but the former is perennial, while the latter is annual, with much smaller flowers than in *tenuifolius*. Only a few plants of *Sabatia stellaris*, the beautiful sea pink, were found in flower, but *Pluchea camphorata*, the salt marsh fleabane, was present in fair abundance. *Iva* and *Baccharis* were plentiful and in flower as usual. Eighteen members and guests comprised the party.

ARTHUR H. GRAVES

SATURDAY, SEPTEMBER 19

A group of over thirty was led by Dr. Alfred Gundersen along the top of the Palisades north from the Dyckman Street

ferry, and then back through the woods to the west. The object of the trip was the study of goldenrods. Specimens of all the varieties found were collected as the party went along. After eight or nine species had been found, the group sat down under the trees to determine them with the aid of a simplified key Dr. Gundersen had mimeographed for distribution. It was thus found comparatively easy to distinguish the species found with the exception of *Solidago altissima* and *S. rugosa*. Many plants found seemed to be intermediate in various degrees as to leaf and flower head characters between these two species. A large oak noticed by the party was apparently a hybrid between the red and black oaks, the leaves and large acorns resembling the red oak, but the cups in shape and loose scales resembling the black. In the definite objective which was followed to the exclusion of more general botanizing the trip was an unqualified success.

G. T. H.

WEEK END OF SEPTEMBER 25-27

Over 70 members of the Torrey Club, the American Fern Society and the Philadelphia Botanical Society registered at the Pig'n Whistle Inn at Brown's Mills in the Pine Barrens of New Jersey. The leaders, Mr. and Mrs. William Gavin Taylor had made all arrangements for the entertainment of the party and had planned a most interesting program and itinerary. Despite an intermittent rain on the Saturday, the party covered a large amount of ground by autos, visiting West Plains, where cars were left while all walked for a mile or more through a dwarf forest of pines (*Pinus rigida*) and scrub oaks (*Quercus marilandica* and *Q. ilicifolia*), the trees mostly less than four feet high. Below the trees were the heath-like broom crowberry (*Corema Conradii*), Hudsonia (*Hudsonia ericoides*) and sand myrtle (*Leiophyllum buxifolium*), the last with a few belated flowers. A few plants of the pine barrens gentian (*Gentiana Porphyrio*) were found but the blossoms were only half open because of the lack of sunshine. In an abandoned cranberry bog, reached after another drive and a walk through the scrub growth, the curly-grass fern (*Schizaea pusilla*) was found growing on the edges of what, at one time, had been a small drainage ditch. Near it grew the thread-leaved and round-leaved sundews (*Drosera filiformis* and *D. rotundifolia*) the plants bearing

ripe capsules and a club moss (*Lycopodium alopecuroides*). The bog here was grown up with white cedars (*Chamaecyparis thyoides*). Another drive through miles of pine forest, here trees thirty feet or more in height, brought the group to a station for the climbing fern (*Lygodium palmatum*). In a meadow that had been mowed earlier in the season the fern was growing abun-



CURLY-GRASS FERN

Fertile leaves above; curled, sterile leaves in the moss below.

dantly, but the plants were not over four or five inches high. Further on in the woods the plants climbed to a height of two or three feet among the bushes. Another drive, and the party hunted for the Massachusetts fern (*Aspidium simulatum*) in a boggy place. With it was found the Virginia chain fern (*Woodwardia virginica*). In another place the two species of *Woodwardia* (*virginica* and *areolata*) were found, growing together near a brook. The Virginia chain fern—as pointed out by Dr. Wherry—often becomes a troublesome weed in the cranberry bogs, almost the only fern of our region to become troublesome in any way.

After dinner there was an evening program of talks in the dining hall of the inn. Mr. Torrey's talk is printed elsewhere in this issue. Dr. Edgar T. Wherry spoke on the soil characters of the region as they affect the flora. He said the sandy soil had had all the bases leached out resulting in a soil so acid that almost no bacteria could grow in it, even the coffee-colored streams of the region are almost free of bacteria. The acid condition of the soil is responsible for the stunted growth of pine and oak trees which may be only three feet high, though over a hundred years old. The amount of endemism in the pine barrens flora is too little to warrant the idea of extreme age. Mr. A. Tennyson Beals spoke briefly on the mosses of the region, stating that sphagnums are the most characteristic mosses of the bogs of the region, 23 species of the genus being found. Mrs. Gladys P. Anderson spoke of the lichens and showed specimens she had collected. Mrs. Anderson also distributed some mounted specimens with mimeographed keys and had those present determine the species. Dr. William S. Thomas spoke of the mushrooms, noting that some species seemed to develop unusual shapes and colors under the peculiar conditions of the barrens. The program was concluded by a talk by Dr. M. A. Chrysler, illustrated by lantern slides made by natural color photography of characteristic flowers and ferns of the region.

Sunday morning the party visited the home of Miss Elizabeth White. In her garden were seen many of the uncommon plants of the barrens, large numbers of the pine barrens gentian in bloom attracting most attention. Several *Franklinia* trees (*Gordonia Altamaha*) with their large white flowers, were of especial interest. The party also saw the nursery beds where Miss White is growing several thousand cuttings of *Franklinia*. Thrifty pitcher plants (*Sarracenia purpurea*) with matured fruit and the Venus fly trap (*Dionaea muscipula*) were also seen in the garden. Miss White conducted the party through some of her extensive plantings of giant blueberries and described the methods of selecting and hybridizing by which she had secured several varieties in which the berries average over three fourths of an inch in diameter. Cranberry bogs in various stages of development were also seen. The party returned for a late dinner at the inn. The success of the trip was in large

measure due to the careful planning and graciousness of Mr. and Mrs. Taylor.

GEORGE T. HASTINGS

MONDAY, OCTOBER 12

A small party was led by Mrs. Gladys P. Anderson to Longwood Valley and Green Pond for a study of lichens. Mrs. Anderson had prepared a mimeographed leaflet for those on the trip, describing about sixty of the more common lichens, with a key for determining them. Some twenty species, exclusive of a variety of crustose forms, were found and studied. The little peltate forms of *Dermatocarpon* growing on the rocks, resembling miniature rock tripe, were especially interesting. The woolly *Crocynia* was abundant on the cliffs, beautiful plants of *Parmelia rudecta* and *caperata* were growing on the tree trunks with several species of *Physcia*. A number of species of *Cladonia* and the related *Baeomyces roseus* were found. The limestone ridges were rich in ferns—extensive patches of the walking fern, *Camptosaurus rhizophyllus*, scattered plants of the cliff brake, *Pellaea atropurpurea*, and the dainty wall spleenwort, *Asplenium Ruta-muraria* with an abundance of the maiden-hair spleenwort, *Asplenium Trichomanes*, as well as many of the more common species. The party examined several books on lichens that Mrs. Anderson had brought during lunch time while waiting for the coffee to percolate. In spite of its double wrapping of brown and wax paper the coffee was finally done, its unusual method of preparation adding to the zest with which it was finally consumed.

G. T. H.

PRICKLY PEAR ON BEARFORT MOUNTAIN

The most notable discovery of the field trip on Sunday, October 25, on Bearfort Mountain, west of Greenwood Lake, was a large patch of the prickly pear cactus, *Opuntia vulgaris*, which the writer had not found before on this ridge, although it occurs on Carris Hill ten miles south in the Wyanokie Plateau. This Bearfort Mountain stand is the farthest one the writer knows, from the seacoast, in this vicinity, being about 40 miles in a direct line, northwest of New York harbor. It is also the highest of record in this vicinity at about 1350 feet, exceeding in elevation the more meager patch on Bear Mountain in the

Palisades Interstate Park at 1300 feet. It seems evident that the species has no special preference as to the kind of soil it likes; it was here growing upon the Devonian conglomerate (Green Pond formation). It occurs, in the writer's observation, on granite, gneiss, basalt, diabase, dune sand, glacial outwash on Long Island Pine Barren sand, Cretaceous formations in Monmouth County, N. J. (marly sand), and the only nearby formations on which it has not been seen by the writer, are the Triassic sandstones, in New Jersey and Rockland Co. N. Y. or the Hudson Valley limestones and slates, and in Norman Taylor's catalogue it is reported presumably on the latter in Dutchess and Greene Counties.

Another stand of the red spruce was found, in a swamp on the west side of the outer ridge of Bearfort Mountain. It occurs in other swamps on this mountain, but this locality was a new one to the writer.

Lichens were in good condition, especially the cladonias, in fine plump state after a rain and with their apothecia in bright hues. A very large patch of the dog lichen, *Peltigera canina*, covered three square yards. Several small wet spots were densely filled with the virginian chain fern, *Woodwardia virginica*, which appears common on this conglomerate ridge, though much less so east of Greenwood Lake, within the granite-gneiss area.

R. H. T.

LICHEN COLLECTING IN WAWAYANDA SWAMP—NOVEMBER 3

The field trip to the region west of Greenwood Lake, on Election Day, was promptly turned into a lichen collecting excursion when Mrs. Gladys P. Anderson of Rahway, N. J., appeared, for those who know her ardent interest and wide knowledge in that subject yield at once to her leadership. Most of the day was spent in collecting lichens in the rhododendron and southern white cedar swamp on Wawayanda Mountain, along the Appalachian Trail. Mrs. Anderson found the region very rich in lichens and discovered some unusual species.

To beginners in the subject, the commoner species were interesting, such as the beautiful bluish gray *Lecidea albo-caerulescens*, in broad circular thalli on smooth rocks; the golden *Cetraria juniperina pinastri* on the cedars, a handsome black

fruited *Rhizocarpon*, (*petraeum?*), with warm brown thallus, on a smoothly glaciated ledge, and a bright yellow fruited *Placodium* (*Caloplaca*) *aurantiacum*, on thin soil over rocks. *Parmelia conspersa*, the commonest lichen, was everywhere on the rocks, and Mrs. Anderson found the rarer *Parmelia physodes* on the cedars; also other uncommon forms, *Physcia speciosa*, and *Usnea trichodea*, in the swampy woods. Twelve *Parmelias*, ten *Cladonias*, five *Physcias*, three *Pertusarias*, and two *Cetrarias* were found by Mrs. Anderson, also *Leptogium chloromelum* and *Parmeliopsis aleuritis*.

On the way home, the party went back to Devonian botanizing, in the Pequanac shale on the Mount Peter Road, where they found impressions of stems and leaves of *Lepidodendron gaspéanum*. A large colony of an allied but reduced modern plant, *Equisetum aquaticum*, was observed in the northern arm of Greenwood Lake.

R. H. T.

SUNDAY, NOVEMBER 8

A party of over sixty rambled over the gneiss ridge northeast of Nepera Park noting the tree and shrub growth and looking for belated flowers. Along the road an abundance of the stalks of the plantain lily (*Funkia*) were covered with capsules. Witch hazel bushes were covered with flowers, though a few of them seemed to have been touched by the freeze of the night before and had all the blossoms withered, possibly only those most exposed or in the path of air drainage from the hill above had suffered in this way. Three species of aster (*A. cordifolius*, *paniculatus* and *ericoides*) were found in some abundance still in blossom. Three goldenrods (*Solidago latifolia*, *caesia* and *speciosa*) were found in flower, though only a few individual plants of hundreds of each species found had flowers remaining. In a small brook a colony of lizard tail, *Saururus cernuus*, was found in fruit. A few plants of the giant hyssop, *Agastache nepetoides*, attracted attention. As one object of the trip, the study of seeds and fruits had been announced. Of the class of fruits adapted to cling to clothing an abundance was collected—without intent—by the party. These represented several species of tick trefoil, black snakeroot, sweet cicely, agrimony, Virginia knotweed, burdock and cocklebur. Most of the party spent considerable time on the homeward ride on the trolley picking off these seeds.

G. T. H.